drain_fdep

Location: naturalresources\drain_fdep

Description
This layer consists of detailed drainage basins for St. Andrew-St. Joseph Bays, Chipola River, and Lower Choctawhatchee River. This layer features 348 polygons covering parts of seven counties, including all of Bay County. (Arc attributes are included in the coverage.)

Source
This data is based on a cooperative dataset between Florida Dept. of Environmental Protection (FDEP) and Northwest Florida Water Management District (WMD). Drainage basin boundaries were interpreted and digitized from USGS 7.5-minute quad maps by FDEP, with modifications and updates from the WMD. See FDEP lineage report below.

In March 2000, Bay County GIS staff retrieved basin-24 statewide data from the FDEP's GIS web site www.dep.state.fl.us/gis. Bay County GIS staff renamed the coverage **drain_huc16**, then created **drain_fdep** by reselecting for St. Andrew Bay, Lower Choctawhatchee River, and Chipola River only (**huc** in {'03130012','03140101','03140203'}).

In December 2000, Bay County GIS staff combined existing polygon attributes into new attributes **Exthuc1** – **4**, as well as recalculating arc attribute **level** = 11 on a few lines.

This **drain_fdep** layer has more subdivisions, has subdivisions outside Bay County, and is more recent than the **drain** layer. Also, the northeast boundary of Juniper Creek basin is slightly different. Also see **drain.doc**.

Also see **drain_deerpt.doc**.

This data is provided with the understanding that the conclusions drawn from such information are solely the responsibilities of the user. The GIS data is not a legal representation of the features depicted, and any assumption of the legal status of this data is hereby disclaimed. Errors or omissions should be reported to the Bay County GIS Division 850-784-6171.

Polygon Attribute Table Structure

Item Name	Width	Output	Type	Decimals
Huc	9	9	C	-
Hucname	32	32	C	-
Exthuc	9	9	C	-
Basin	23	23	C	-
Feature	7	7	C	-
Pk_basin	6	6	I	0
Uflag	1	1	C	-
Date	5	5	C	-
Exthuc1	18	18	C	-

Exthuc2	18	18	C	-
Exthuc3	18	18	C	-
Exthuc4	18	18	C	-

Polygon Attributes

huc

8-digit USGS hydrological unit code for USGS cataloging units.
The digits signify a hydrologic hierarchy based on surface hydrological features:

- 1st 2 digits denote Region — 03 South Atlantic-Gulf, including all of Fla.
- 1st 4 digits denote Subregion — 0313 Apalachicola or; 0314 Choctawhatchee - Escambia
- 1st 6 digits denote Accounting Unit (aka basin) — 031300 Apalachicola or; 031401 Florida Panhandle Coastal or; 031402 Choctawhatchee River Basin
- 1st 8 digits denote Cataloging Unit (aka sub-basin or watershed) — **03130012 Chipola**; **03140101 St. Andrew-St. Joseph Bays**; **03140203 Lower Choctawhatchee**

hucname

Name of watershed (aka cataloging unit) based on **huc**, including Chipola, St. Andrew-St. Joseph Bays, and Lower Choctawhatchee.

St. Andrew-St. Joseph Bays includes 2 polys that are bays and 2 polys that are questionable; in July 2001, Bay County GIS staff slightly modified **hucname** to indicate these 4 polys.

Also see
http://water.usgs.gov/GIS/huc.html
http://water.usgs.gov/GIS/huc_name.txt (partial list below)
http://www.epa.gov/surf3/counties/12005/
http://www.epa.gov/surf3/watershed.html
http://www.epa.gov/surf3/images/us_water.gif

Exthuc

8-digit USGS extended hydrological unit code for further subdivisons of USGS cataloging units. The digits signify a hydrologic hierarchy:

- 1st 2 digits denote primary basin
- 1st 4 digits denote secondary basin
- 1st 6 digits denote tertiary basin
- 1st 8 digits denote quarternary basin

99 indicates that other basins flow into it, important for determining total area of any drainage basin.
99000000 indicates a mainstem waterbody that the HUC is based on, i.e. the main stem of the Choctawhatchee River.

For example, in HUC 03140101, any watershed with an EXTHUC starting with 50 is part of the same primary basin, St. Andrew Bay.

For example, in HUC 03140101, the EXTHUC for Crooked Creek is 50849900. This means that other watersheds flow into it; to determine the total drainage area for Crooked Creek you must also include the drainage area for all EXTHUCs within HUC 03080101 starting with 5084(50845000, 50844600, 50846000, and 50845500). None of these tributary watersheds have a 99 in the EXTHUC, and therefore, none have any additional watersheds flowing into them.

Deer Point Reservoir drainage basin = “5070*” or “50507010”
(5050 probably typo that should be 5070)

Basin
USGS basin name.

Feature
USGS waterbody type.

Pk_basin
Unique statewide ID.

Uflag
Indicates any revisions of original USGS data made by WMDs.

Date
Indicates the month and year of edits/updates, in MMYY format.

Exthuc1
Combination of **Huc** plus 1st 2 digits of **Exthuc**, for unique primary basin code.

Exthuc2
Combination of **Huc** plus 1st 4 digits of **Exthuc**, for unique secondary basin code.
Deer Point Reservoir basin = “5070*” or “50507010”

Exthuc3
Combination of **Huc** plus 1st 6 digits of **Exthuc**, for unique tertiary basin code.

Exthuc4
Combination of **Huc** plus all 8 digits of **Exthuc**, for unique quarternary basin code.

Arc Attribute Table Structure

Item Name	Width	Output	Type	Decimals
Level	3	3	I	0
Uflag	1	1	C	-
Source	5	5	C	-
Date	5	5	C	-

Arc Attributes

Level
Boundary code

1	TILE BORDER
2	WMD BOUNDARY
3	REACH BOUNDARY
5	STATE BOUNDARY
10	NATURAL STREAM MOUTH
11	PRIMARY BASIN BOUNDARY
12	SECONDARY BASIN BOUNDARY
13	TERTIARY BASIN BOUNDARY
14	QUATERNARY BASIN BOUNDARY
15	5TH LEVEL BASIN BOUNDARY
16	6TH LEVEL BASIN BOUNDARY
17	7TH LEVEL BASIN BOUNDARY
18	8TH LEVEL BASIN BOUNDARY
19	9TH LEVEL BASIN BOUNDARY
20	NATURAL LAKE OUTLET
21	LAKE BASIN BOUNDARY
22	DIVERSION FROM LAKE
23	CONTINUOUS LAKE STAGE
24	LOW POINT ON LAND LOCKED BOUNDARY
25	RESERVOIR OUTLET
26	RESERVOIR BOUNDARY
27	DIVERSION FROM RESERVOIR
28	CONTINUOUS OR PERIODIC RESERVOIR STAGE
29	DAILY OR PERIODIC LAKE STAGE
30	CANAL OR CHANNELIZED STREAM OUTLET
31	CHANNELIZED STREAM BOUNDARY
32	LOW OR INDISTINCT BOUNDARY
33	BOUNDARY BREACHED BY BRIDGES
34	BOUNDARY BREACHED BY CANAL
35	NATURAL DIVERSION, HIGH-WATER OVERFLOW
36	CONTROLLED DIVERSION, CONTROL ON SECONDARY OUTLET
37	DAM OR CONTROL
38	MINED AREA
39	NONCONTRIBUTING AREA
40	BAYOU OUTLET
41	BAY OUTLET
42	BAYOU BOUNDARY
43	DIRECT DRAINAGE TO GULF OR BAY
44	CLOSING LINE
45	TIDAL MARSH, NO UPLAND DRAINAGE
46	COASTAL DRAINAGE WITH UPLANDS
47	COASTAL RIVER WITH TRIBUTARIES
48	PRIMARY TRIBUTARY TO COASTAL RIVER
49	SECONDARY TRIBUTARY TO COASTAL RIVER
50	ARTIFICIAL OUTLET
51	LEVEE
52	FARM DIKE
53	--RESERVED--
54	--RESERVED--
55	EARTHEN DITCH OR CANAL PLUG
56	--RESERVED--
57	--RESERVED--
58	--RESERVED--

Uflag
Indicates any revisions of original USGS data made by WMDS.

Source
Code identifying the exact source of updates.

USGS:	orginal USGS
NWF:	edited/created by NWFWMD
SUW:	edited/created by SUWWMD
SJRE:	edited/created by SJRWMD Engineering Section
SJRP:	edited/created by SJRWMD for planning purposes
SWF:	edited/created by SWFWMD
SF:	edited/created by SFWMD

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION LINEAGE REPORT

DATA LAYER NAME : basin-24
DESCRIPTION : Drainage basins determined by DEP
TYPE : polygons and arcs
SCALE : 1 : 24,000
DATUM : HPGN
PROJECTION : Albers Conformal Area
MAP UNITS : meters
GENERAL AREA COVERED : statewide
REPORT PREPARED BY : Dixie Davis; Jennifer Self
DATE OF PREPARATION : 11/30/94; 10/30/96; 2/97

PROVIDING ORGANIZATION

AGENCY : Florida Department of Environmental Protection
CONTACT PERSON : Eric W. Brockwell
TITLE : Systems Project Analyst
PHONE NUMBER : 904/488-0892
AGENCY DATA NAME : basin-24

LINEAGE

DESCRIPTION OF SOURCE MATERIAL(S)

SOURCE TITLE : 7 1/2" USGS Quadrangle maps
SCALE : 1 : 24,000
DATUM : NAD1927
MAP PROJECTION : Lambert Cnfrml. Conic, Trnsvrs. Mrctr., Polyconic
MEDIA OF SOURCE : paper
CONDITION OF MEDIA : new
DATE OF SOURCE MATERIAL : various
UPDATE SCHEDULE :

CREATOR OF SOURCE OR DATA LAYER

AGENCY/ORGANIZATION : Department of Environmental Protection
UNIT/SECTION : Environmental Resource Permitting
CONTACT PERSON : Don Foos
TITLE :
PHONE NUMBER : 904/488-0892

AGENCY/ORGANIZATION : South Florida WMD (digitized SFWMD area)
UNIT/SECTION : Information Systems
CONTACT PERSON : Bob Brown
TITLE :
PHONE NUMBER : 407/686-8800

DERIVATION METHOD(S) FOR DATA

PRE-AUTOMATION COMPILATION :
COMPUTER HARDWARE USED :
OPERATING SYSTEM : VMS

DATABASE SOFTWARE AND VERSION USED : ARC/INFO
GIS/MAPPING SOFTWARE AND VERSION USED : ARC/INFO
METHOD OF AUTOMATION : Digitizing
RESOLUTION OF AUTOMATION : .001
TOLERANCE OF DIGITIZER, SCANNER, ETC. :
INITIAL DATE OF AUTOMATION : 1989-1993
UPDATE SCHEDULE : biannual
SIZE OF DIGITAL FILE :
FORMAT OF DIGITAL FILE :
CONTROL POINTS -

NAME OF COORDINATE SYSTEM USED : Lambert
LIST REGISTRATION POINTS : A point grid was generated by converting latitude and longitude to lambert projection.

_____ _____

_____ _____

NOTES ON DERIVATION : The basin boundaries were hand drawn on quads then digitized along with streams to provide regional coverages.

EXPLANATION OF PROCEDURES USED TO TRANSFORM THE DATA
(verbal description, algorithms, projection, commands, etc., as needed)
In Spring of '97, the data was converted from NAD27 to HPGN using the Arc/INFO projection command within Arc/INFO version 7.0.4.

One coverage of the entire state, excluding South Florida was digitized using ARC/INFO. The South florida coverage was digitized by SFWMD from USGS mylars of 7.5' quads dated 1978-1979 by engineers familiar with the landscape using ARC/INFO 6.1.1. The two coverages were joined to form a statewide coverage using the update command, then polygon slivers were eliminated. Check plots were made. The coverage was converted to Albers Conformal Area projection and exported from the VAX VMS system using ARC/INFO. On the DEC/ALPHA UNIX system, the export file was imported and inserted into the (quad) library.

For more information, contact the Department of Environmental Protection or South Florida Water Management District for copies of data dictionaries.

UPDATES TO BASIN COVERAGE
An updated version of the basin coverage was completed in February 1997. DEP made updates to the basin coverage according to documentation received by WMDs. WMD updates consisted of polygon and arc attribute changes and arc modifications, additions, and deletions in SWFWMD and SRWMD. SWFWMD made changes to basin names and exthucs in the polygon attribute table and to level values in the arc attribute table. SWFWMD also modified arcs in HUC 03090101 near the SFWMD boundary. Two polygons were also deleted in the SWFWMD (pk_basin 1532 and pk_basin 1619). SRWMD made changes to basin names and exthucs in the polygon attribute table. SRWMD also modified arcs in HUC 03110206, added arcs in several HUCs in the district and deleted arcs in HUC 03110206. As a result of SRWMD arc additions, the following pk_basins#'s were added 3308, 3727, 3730, 3735, 3741, 3744, 3745, 3748, as well as pk_basin#'s 3800-3821.
Additional DEP updates consisted of adding a DATE field to the polygon and arc

atttribute tables and enhancing the SOURCE field in the arc attribute table. For further explanation, see the polygon and arc attribute table descriptions below.
Future updates to the basin coverage will be handled by USGS.

The following is a description of the polygon attribute table(PAT).

COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE	N.DEC	ALTERNATE NAME	INDEXED?
1	AREA	4	12	F	3		-
5	PERIMETER	4	12	F	3		-
9	BASIN#	4	5	B	-		-
13	BASIN-ID	4	5	B	-		-
17	HUC	8	9	C	-		-
25	EXTHUC	8	9	C	-		-
33	BASIN	22	23	C	-		-
55	FEATURE	6	7	C	-		-
61	PK_BASIN	6	6	I	-		-
67	UFLAG	1	1	C	-		-
68	DATE	5	5	C	_	_	

PAT DESCRIPTION :

HUC - USGS hydrological unit code. See attached SJRWMD Data Lineage Report for further explanation.

EXTHUC - USGS extended hydrological unit code. See attached SJRWMD Data Lineage Report for further explanation.

BASIN - USGS basin name.

FEATURE - USGS waterbody type. Lagoon and reach were added by SJRWMD. See Section 1 of attached SJRWMD Data Lineage Report for further explanation.

PK_BASIN - Unique statewide ID.

UFLAG - Indicates any revisions of original USGS data made by WMDs. See attached SJRWMD Data Lineage Report for further explanation.

DATE - Indicates the month and year of edits/updates.
DATE CODE:
0000: MMYY

The following is a description of the arc attribute table(AAT) :

COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE	N.DEC	ALTERNATE NAME	INDEXED?
1	FNODE#	4	5	B	-		-
5	TNODE#	4	5	B	-		-
9	LPOLY#	4	5	B	-		-
13	RPOLY#	4	5	B	-		-
17	LENGTH	4	12	F	3		-
21	BASIN#	4	5	B	-		-
25	BASIN-ID	4	5	B	-		-
29	LEVEL	2	3	I	-		-
31	UFLAG	1	1	C	-		-

32	SOURCE	5	5	C	-	-	
44	DATE	5	5	C	-		-

AAT DESCRIPTION :

LEVEL - Represents boundary codes for each arc. In order to maintain consistency,the original tile boundary code (0) was edited to reflect SJRWMD's current boundary code(1). The reach boundary was added by SJRWMD. See attached SJRWMD Data Lineage Report for further explanation.

UFLAG - Indicates any revisions of original USGS data made by WMDS. See attached SJRWMD Data Lineage Report for further explanation.

SOURCE - Identifies the exact source of past and future updates. SJRWMD's current SOURCE was modified from integers to characters in order to maintain consistency with the SOURCE in our library.
SOURCE CODE:
USGS: orginal USGS
NWF: edited/created by NWFWMD
SUW: edited/created by SUWWMD
SJRE: edited/created by SJRWMD Engineering Section
(see attached SJRWMD Data Lineage Report)
SJRP: edited/created by SJRWMD for planning purposes
(see attached SJRWMD Data Lineage Report)
SWF: edited/created by SWFWMD
SF: edited/created by SFWMD

DATE - See PAT description above.

LIMITATIONS OF THE DATA / WARNINGS TO THE USER :

USGS will distribute updated coverages on a bi-annual basis.

Regional variations of basin borders and the number of basins may exist between updates.

-

SJRWMD DATA LINEAGE REPORT

DATA LAYER: Surface Water Basins

MAP UNIT: Major basins encompassing the District

SOURCE SCALE: 1:24,000

DATA TYPE: arc, polygon

LAST TEXTFILE UPDATE: 2/28/95

SOURCE: USGS personnel delineated basin boundaries on 1:24,000 7.5 minute base maps, and then digitized the boundaries. The data was submitted to the District in 1991.

QA STATUS: The Divisions of Environmental Science and Engineering quality assured and extensively modified the data.

DISTRICT COVERAGE STATUS: complete

NOTES:
1. Look-up tables associated with the USGS basins coverage: (all are located in /tlib/sets)

NAME	ITEMS	PURPOSE
majors.lut	MAJOR, SYMBOL	for shading by major basin (rgb.shd)
majornames.lut	MAJOR, NAME	contains major basin names
punames.lut	PU, NAME	contains planning unit names
drainage.lut	FIRST, SYMBOL	for shading individual drainage basins, which have the same value for FIRST (colornames.shd)

2. A report documenting the data layer (with maps and tables) is available: Surface Water Drainage Basin Boundaries: A Reference Guide. Technical Memorandum No. 8, Water Resources Department. February 1995.

PAT ITEM DEFINITIONS:

COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE	N.DEC	ALTERNATE NAME	INDEXED?
1	AREA	4	12	F	3		-
5	PERIMETER	4	12	F	3		-
9	SWBASINS#	4	5	B	-		-
13	SWBASINS-ID	4	5	B	-		-
17	HUC	8	9	C	-		-
25	EXTHUC	8	9	C	-		-
33	BASIN	22	23	C	-		-
55	FEATURE	6	7	C	-		-
61	SOURCE	1	1	I	-	GS-0_ENG-1_PL-2	-
62	MAJOR	2	2	I	-	MAJOR_BASIN	-
64	PU	3	4	C	-	PLANNING_UNIT	-
67	PU-ID	2	2	C	-	WATERSHED_ID	-
69	LINK#	4	5	B	-	UNIQUE_NUM_ID	-

73	PU7G	2	2	I	-	OR_CK_SUBBASINS	-
75	PK_BASIN	6	6	I	-	STATEWIDE_ID	-
81	UFLAG	1	1	C	-		-
82	ACRES	4	12	F	1		-
	** REDEFINED ITEMS **						
25	FIRST	2	2	I	-		-
27	SECOND	2	2	I	-		-
29	THIRD	2	2	I	-		-
64	ID	5	6	C	-	UNIQUE_ID	-

UNIQUE PAT ITEM VALUES AND DEFINITIONS:

Original USGS items:

HUC - USGS hydrologic unit code. Hydrologic unit is a USGS designation for the major drainage basins in Florida; the term is used state-wide. There are eight hydrologic units in the District.

EXTHUC - The extended hydrologic unit code is an eight digit code assigned by USGS to each watershed. The digits signify a hydrologic hierarchy:

- the first two digits denote the primary basin (redefined as item FIRST)
- the second two digits denote the secondary basin (SECOND)
- the third two digits denote the tertiary basin (THIRD)
- the fourth two digits denote the quaternary basin (FOURTH)
- For example, in HUC 03080101 any watershed with an EXTHUC starting with 15------ is part of the same drainage basin (Jane Green Creek).
- If a watershed's EXTHUC contains 99 (99------, --99----, ----99--, or ------99), this indicates that other watersheds flow into it. This is important for determining the total area of any drainage basin. For example, in HUC 03080101, the EXTHUC for Tyson Creek is 15509900. This means that other watersheds flow into it, and to determine the total drainage area for Tyson Creek you must also include the drainage area for all EXTHUCs within HUC 03080101 starting with 1550 (15505000, 15505500, 15505700, and 15506000). None of these tributary watersheds have a 99 in the EXTHUC, and therefore, none have any additional watersheds flowing into them.
- EXTHUC = 99000000 is used for the main waterbodies that each HUC is based on, i.e. the main stem of the St. Johns River, Ocklawah River, Indian River Lagoon, etc.. These mainstem watersheds are more uniquely described by the planning unit codes (pu and pu-id).

BASIN - Name (e.g. Sixmile Creek, unnamed canal, Crescent Lake)

FEATURE - Waterbody type - see SECTION 1 for descriptions

Items added by SJRWMD:

SOURCE - Indicates if the watershed boundaries were revised by District staff:

0 = original USGS polygon
1 = polygon created or revised by Engineering (Dave Clapp) based on project area knowledge
2 = polygon created or revised for planning purposes (by Chris Adamus); usually to subdivide long river polygons

MAJOR Major basin number, 1 through 10 - see SECTION 2 for names.
- The District's ten major basins are based on the eight USGS hydrologic units, which District staff further divided for project and management purposes. For example, HUC 03080101 is composed of three major basins: the Upper St. Johns River basin,the Middle St. Johns River basin, and the Lake George basin.

PU Planning Unit: see SECTION 3 for names.
- Planning units are designations assigned to the drainage basin data layer in order to organize the data in a way useful to District planning or management efforts. A planning unit is either an individual drainage basin or a group of adjacent drainage basins with similar characteristics. For example:
- Larger drainage basins such as the Econlockhatchee River or Black Creek each comprise a planning unit.
- Smaller, adjacent drainage basins were combined into planning units. These aggregate planning units contain the word "Unit" in their name.

PU-ID Planning unit ID:
- each planning unit is comprised of many smaller watersheds; this number identifies these watersheds
- Watersheds are the smallest delineated area in the drainage basin data layer.

PU7G Orange Creek (Planning Unit 7G) Subbasins
- Drainage basins within the Orange Creek Planning Unit are not clearly defined by the EXTHUC codes, so this item was created:
  1 - Hogtown Creek
  2 - Paynes Prairie
  3 - Newnans Lake
  4 - Lochloosa Lake
  5 - Orange Lake
  6 - Orange Creek

LINK# - a numeric unique ID - for times when numeric IDs are necessary, such as when creating grids

Items added by DEP:

PK_BASIN - unique statewide ID

UFLAG - update flag which indicates if the polygon was revised from the original USGS polygon:
A = attribute change only
M = existing arcs were revised (minor modification)
N = arcs wre radically revised or basin was subdivided further

U = attribute change and revised arcs or totally new basin

Redefined items :

FIRST, SECOND, THIRD and FOURTH - see EXTHUC

ID - a unique ID for each polygon, or watershed

AAT ITEM DEFINITIONS:

COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE	N.DEC	ALTERNATE NAME	INDEXED?
1	FNODE#	4	5	B	-		-
5	TNODE#	4	5	B	-		-
9	LPOLY#	4	5	B	-		-
13	RPOLY#	4	5	B	-		-
17	LENGTH	4	12	F	3		-
21	NEWBASINS#	4	5	B	-		-
25	NEWBASINS-ID	4	5	B	-		-
29	LEVEL	2	3	I	-		-
31	SOURCE	1	1	I	-	GS-0_ENG-1_PL-2	-

UNIQUE AAT ITEM VALUES AND DEFINITIONS:

ITEM	VALUE	DESCRIPTION
LEVEL	- boundary codes for each arc - see SECTION 4 for description - not all arcs are coded	
SOURCE	0 =	original USGS arc
	1 =	arc created by Engineering (Dave Clapp) based on project area knowledge
	2 =	arc created for planning purposes (by Chris Adamus); usually to subdivide long river polygons

---
ANNOTATION: yes
Notes: There are 60 annotations that represent the planning unit codes. The annotations are very large in size. All are symbol one.

SECTION 1:

THE NAMES OF FEATURES FROM ITEM FEATURES IN PAT

The names of FEATURE's in the Coverage.PAT is a descriptor that attempts to segregate drainage areas into classes. The separation of the classess was an attempt to combine size, type, and artificiality into useful divisions for plotting.

The definitions of these descriptors are by Don Fouse (USGS Tallahassee), followed by definitions from the "International Glossary of Hydrology" compiled by a joint committe of the World Meteorological Organization and the United Nations Educational, Scientific, and Cultural Organization. Don's definitions are tailored to Florida or to GIS needs.

These definitions are listed with my defintiion as 1. and the IGH definition listed as 2.

STREAM 1. A natural surface-water feature with flow in a defined channel.
2. A body of water, generally flowing in a natural surface channel.

DRAIN 1. A small stream, generally unnamed, with a defined channel, that typically, accepts overflow from a swamp or other depression.

DITCH 1. A small manmade drainage feature, usually completely artificial but occaisonally a channelized drain.
2. An artificial small-size open channel constructed through earth or rock for the purpose of conveying water.

CANAL 1. A large manmade drainage feature, usually completely artificial but may be a channelized stream. Often named.
2. Artificial open channel.

SLOUGH 1. A natural surface-water feature with flow but no defined channel.
2. Not defined by IGH.

LAKE 1. A natural body of water. Small lakes may be called ponds. Waterfilled sinkholes are often considered to be lakes. Wide portions of streams with greatly reduced flow are usually considered lakes.
2. An inland body of water of considerable size.

RESERV 1. An artificial lake or pond. Includes stock ponds, real estate lakes,
and impoundments. A reservoir.
2. A body of water, either natural or artificial, used for storage, regulation, and control of water.

NONCON 1. Area that is within the drainage boundary of a water feature but which is drained internally and does not contribute runoff to the water feature. A noncontributing area.
2. Not defined by IGH.

OUTLET 1. Outflow stream from a reservoir or lake.
2. Opening through which water flows out of a reservoir or stream.

BAY 1. Invagination in the coastal shoreline prominent enough to be considered a seperate feature. Usually named.
2. Not defined by IGH.

BAYOU 1. A stream without gradient but with flow generated by tide or stream discharge.
2. Not defined by IGH.

LAGOON 1. An elongated shallow water body with poorly defined tidal flux, protected bya barrier island.
2. A shallow sound, channel, or pond communicating with a larger body of water, or a shallow artificial pool or pond.

RUNOFF 1. Direct surface or subsurface flow to a water body.
2. Outflow of water towards the streams along the ground surface or within the soil.

REACH 1. A section of a stream. The section will often be separated by a lake or marsh from other sections and may have a different name.
2. A straight, continuous, or extended part of a stream viewed without interruption (as between two bends) or chosen between two specified points:....

SECTION 2:

SJRWMD MAJOR BASINS FROM ITEM MAJOR IN PAT

1 NASSAU RIVER
2 ST. MARYS RIVER
3 LOWER ST. JOHNS RIVER
4 MIDDLE ST. JOHNS RIVER
5 LAKE GEORGE
6 UPPER ST. JOHNS RIVER
7 OCKLAWAHA RIVER
8 FLORIDA RIDGE
9 UPPER COASTAL
10 INDIAN RIVER LAGOON

SECTION 3:

NAMES OF SJRWMD MAJOR BASINS AND PLANNING UNITS FROM ITEM PU IN PAT

01 NASSAU RIVER
1A Nassau River

02 ST. MARYS RIVER
2A Upper St. Marys River
2B Middle St. Marys River
2C Lower St. Marys River

03 LOWER ST. JOHNS RIVER
3A Crescent Lake
3B Etonia Creek
3C Black Creek
3D Ortega River
3E Trout River
3F Deep Creek Unit
3G Sixmile Creek
3H Julington Creek
3I Intracoastal Waterway
3J South Mainstem Unit
3K North Mainstem Unit

04 MIDDLE ST. JOHNS RIVER
4A Econlockhatchee River
4B Deep Creek Unit
4C Lake Jesup
4D Lake Monroe Unit
4E Wekiva River

05 LAKE GEORGE

```
    5A  Lake Woodruff Unit
    5B  Alexander Springs Creek
    5C  Lake George Unit
    5D  Lake Kerr Unit

06  UPPER ST. JOHNS RIVER
    6A  Fort Drum Creek Unit
    6B  Blue Cypress Creek Unit
    6C  Fellsmere
    6D  Interbasin Diversion
    6E  Jane Green Creek
    6F  St. Johns Marsh
    6G  Lake Poinsett Unit
    6H  Tosohatchee Unit
    6I  Puzzle Lake Unit

07  OCKLAWAHA RIVER
    7A  Palatlakaha River
    7B  Lake Apopka
    7C  Lake Harris Unit
    7D  Lake Griffin Unit
    7E  Marshall Swamp Unit
    7F  Rodman Reservoir Unit
    7G  Orange Creek

08  FLORIDA RIDGE
    8A  Florida Ridge Unit

09  UPPER COASTAL
    9A  Halifax River
    9B  Pellicer Creek Unit
    9C  Matanzas River
    9D  Tolomato River

10  INDIAN RIVER LAGOON
    10A  Mosquito Lagoon
    10B  Banana River
    10C  North Indian River Lagoon
    10D  North Central Indian River Lagoon
    10E  South Central Indian River Lagoon


SECTION 4:
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BOUNDARY CODES FROM ITEM LEVEL IN AAT

1        TILE BORDER
2        WMD BOUNDARY
3        REACH BOUNDARY
5        STATE BOUNDARY
10       NATURAL STREAM MOUTH
11       PRIMARY BASIN BOUNDARY
12       SECONDARY BASIN BOUNDARY
13       TERTIARY BASIN BOUNDARY
14       QUATERNARY BASIN BOUNDARY
15       5TH LEVEL BASIN BOUNDARY
16       6TH LEVEL BASIN BOUNDARY
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17 7TH LEVEL BASIN BOUNDARY
18 8TH LEVEL BASIN BOUNDARY
19 9TH LEVEL BASIN BOUNDARY
20 NATURAL LAKE OUTLET
21 LAKE BASIN BOUNDARY
22 DIVERSION FROM LAKE
23 CONTINUOUS LAKE STAGE
24 LOW POINT ON LAND LOCKED BOUNDARY
25 RESERVOIR OUTLET
26 RESERVOIR BOUNDARY
27 DIVERSION FROM RESERVOIR
28 CONTINUOUS OR PERIODIC RESERVOIR STAGE
29 DAILY OR PERIODIC LAKE STAGE
30 CANAL OR CHANNELIZED STREAM OUTLET
31 CHANNELIZED STREAM BOUNDARY
32 LOW OR INDISTINCT BOUNDARY
33 BOUNDARY BREACHED BY BRIDGES
34 BOUNDARY BREACHED BY CANAL
35 NATURAL DIVERSION, HIGH-WATER OVERFLOW
36 CONTROLLED DIVERSION, CONTROL ON SECONDARY OUTLET
37 DAM OR CONTROL
38 MINED AREA
39 NONCONTRIBUTING AREA
40 BAYOU OUTLET
41 BAY OUTLET
42 BAYOU BOUNDARY
43 DIRECT DRAINAGE TO GULF OR BAY
44 CLOSING LINE
45 TIDAL MARSH, NO UPLAND DRAINAGE
46 COASTAL DRAINAGE WITH UPLANDS
47 COASTAL RIVER WITH TRIBUTARIES
48 PRIMARY TRIBUTARY TO COASTAL RIVER
49 SECONDARY TRIBUTARY TO COASTAL RIVER
50 ARTIFICIAL OUTLET
51 LEVEE
52 FARM DIKE
53 --RESERVED--
54 --RESERVED--
55 EARTHEN DITCH OR CANAL PLUG
56 --RESERVED--
57 --RESERVED--
58 --RESERVED--

Partial list of hydrological units from USGS Water-Supply Paper 2294
http://water.usgs.gov/GIS/huc_name.txt retrieved 12-8-00 from
http://water.usgs.gov/GIS/huc.html

Subregion 0313 -- Apalachicola: The coastal drainage and associated waters from the Ochlockonee River Basin boundary to and including the Apalachicola River Basin and the drainage into Apalachicola Bay. Alabama, Florida, Georgia.
Area = 20500 sq.mi.

Accounting Unit 031300 -- Apalachicola. Alabama, Florida, Georgia.
Area = 20500 sq.mi.

Cataloging Units 03130001 -- Upper Chattahoochee. Georgia.
Area = 1560 sq.mi.
03130002 -- Middle Chattahoochee-Lake Harding. Alabama, Georgia.
Area = 3060 sq.mi.
03130003 -- Middle Chattahoochee-Walter F. George Reservoir. Alabama, Georgia.
Area = 2880 sq.mi.
03130004 -- Lower Chattahoochee. Alabama, Florida, Georgia.
Area = 1300 sq.mi.
03130005 -- Upper Flint. Georgia.
Area = 2630 sq.mi.
03130006 -- Middle Flint. Georgia.
Area = 1570 sq.mi.
03130007 -- Kinchafoonee-Muckalee. Georgia.
Area = 1090 sq.mi.
03130008 -- Lower Flint. Georgia.
Area = 1290 sq.mi.
03130009 -- Ichawaynochaway. Georgia.
Area = 1110 sq.mi.
03130010 -- Spring. Georgia.
Area = 778 sq.mi.
03130011 -- Apalachicola. Florida, Georgia.
Area = 1130 sq.mi.
03130012 -- Chipola. Alabama, Florida.
Area = 1270 sq.mi.
03130013 -- New. Florida.
Area = 569 sq.mi.
03130014 -- Apalachicola Bay. Florida.
Area = 266 sq.mi.

Subregion 0314 -- Choctawhatchee - Escambia: The coastal drainage and associated waters from the Apalachicola Bay drainage boundary to the Mobile Bay drainage boundary. Alabama, Florida.
Area = 15000 sq.mi.

Accounting Unit 031401 -- Florida Panhandle Coastal: The coastal drainage and associated waters from the

Apalachicola Bay drainage boundary to the
Mobile Bay drainage boundary, excluding
the Choctawhatchee and Escambia River
Basins. Alabama, Florida, Georgia.
Area = 6060 sq.mi.

Cataloging Units 03140101 -- St. Andrew-St. Joseph Bays. Florida.
Area = 1350 sq.mi.
03140102 -- Choctawhatchee Bay. Florida.
Area = 699 sq.mi.
03140103 -- Yellow. Alabama, Florida.
Area = 1380 sq.mi.
03140104 -- Blackwater. Alabama, Florida.
Area = 860 sq.mi.
03140105 -- Pensacola Bay. Florida.
Area = 543 sq.mi.
03140106 -- Perdido. Alabama, Florida.
Area = 913 sq.mi.
03140107 -- Perdido Bay. Alabama, Florida.
Area = 313 sq.mi.

Accounting Unit 031402 -- Choctawhatchee: The Choctawhatchee River
Basin. Alabama, Florida.
Area = 4670 sq.mi.

Cataloging Units 03140201 -- Upper Choctawhatchee. Alabama.
Area = 1560 sq.mi.
03140202 -- Pea. Alabama, Florida.
Area = 1550 sq.mi.
03140203 -- Lower Choctawhatchee. Alabama,
Florida.
Area = 1560 sq.mi.

Accounting Unit 031403 -- Escambia: The Escambia River Basin.
Alabama, Florida.
Area = 4290 sq.mi.

Cataloging Units 03140301 -- Upper Conecuh. Alabama.
Area = 853 sq.mi.
03140302 -- Patsaliga. Alabama.
Area = 593 sq.mi.
03140303 -- Sepulga. Alabama.
Area = 1050 sq.mi.
03140304 -- Lower Conecuh. Alabama, Florida.
Area = 1010 sq.mi.
03140305 -- Escambia. Alabama, Florida.
Area = 780 sq.mi.